



Memorandum

Water Utilities Department

Date: March 28, 2001
To: Mayor and Council
From: Tom Gallier, Water Utilities Manager (x2625)
Cc: John Greco, Interim City Manager (x8457)
Will Manley, City Manager Designate (x8457)
Patrick Flynn, Chief of Finance (x8399)
Subject: Work Study Session on Water Utilities Capital and Financial Programs

Summary and Recommendations

At the March 27, 2000 Mid-Year Advance, Council directed staff to proceed with the Water Utilities Integrated Master Plan based on the "General Plan 2020+" development/redevelopment scenario, and to return to Council with a detailed analysis of rate and "Impact Fee" (i.e., Water/Sewer Development Fee) funding requirements necessary to implement the resulting proposed Capital Improvement Program (i.e., Water/Sewer C.I.P.).

Staff has completed the Integrated Master Plan, and prepared a proposed comprehensive six year C.I.P. and financial analysis of both Water/Sewer rates and development fee adjustments that will be necessary to fund the program. Two Scenarios have been evaluated: Scenario 1 consists of rate adjustments alone, without changing the existing Water/Sewer development fees; and, Scenario 2 consists of a combination of rate adjustments and development fee increases sufficient to result in growth paying its fair share of capital costs.

Staff will present this information at the April 5th Council Work-Study Session. An Executive Summary of the Integrated Master Plan, the development fee and rate impact analyses, and copies of the Power Point slides that will accompany the staff presentation, are attached for your review prior to the meeting.

Key points are as follows:

- The Integrated Master Plan has recommended a six-year Water/Sewer Capital Improvement Program of approximately \$183 million.
- The proposed C.I.P. is allocated between growth (46%), rehabilitation and replacement of existing facilities (27%), and regulatory driven improvements (27%).

- Following Council's direction to "prepare an analysis and recommendations for possible **impact fees**" staff is recommending an increase in Water/Sewer Development Fees of approximately 57%. This increase should be sufficient to cover the growth-related component of the proposed Capital Improvement Program.
- Following Council's direction to plan for "incremental annual rate increases," staff has developed a recommended rate adjustment plan that would hold annual increases to approximately 2-3% of the **total** water/sewer monthly bill. In any given year, either the water or the sewer component of the bill could be slightly larger or smaller, but the **total** increase would still be within this range.
- Implementation of the recommended development fee and rate adjustments should allow Tempe to remain at or at least very near the lowest cost water/sewer utility in the Phoenix metropolitan area.

Requested Direction from Council

- Is the proposed Water/Sewer Capital Improvement Program acceptable as presented?
- Staff is recommending an approximate 57% increase in Water/Sewer Development Fees to cover growth-related costs in this Capital Improvement Program. Can staff move forward with the process to enact such development fee increases?
- Staff is recommending approximate annual 2-3% rate increases on the **total** water/sewer bill. We would like to proceed with an effective target date of November/December of this year, for the first annual increase. Can staff move forward with the rate adjustment process?
- Staff would like to propose that future rate adjustments be considered on a biennial basis, concurrent with consideration of biennial operating and capital Water Utilities Department budget requests? Is this agreeable to Council?

Conclusions

Staff believes that the recommended six year Capital Improvement Program requests, combined with the recommended funding program, best serve the immediate and long-term water and sewer infrastructure needs of Tempe's existing and future utility customers. Tempe's unique position regarding a mixture of redevelopment and new development within a relatively confined geographic area allows us to maximize the efficiency of our existing water and sewer infrastructure. This allows us to maintain both our Water/Sewer Utility rates and development fees lower than surrounding Valley communities, while achieving the community's vision of sustainable economic development and maintenance of vibrant and healthy neighborhoods. Continuing efforts to control our operating costs through reengineering efforts has also assisted in limiting the rate and development fee impact of this substantial Capital Improvement Program. Finally, by maintaining adequate utility financial reserves, and implementing annual rate

adjustments, we believe the utility will be able to avoid future dramatic one-time increases in either water or sewer rates.

In summary, we believe that the recommended Capital Improvement Program and associated financing plan will allow Tempe to properly maintain existing aging infrastructure, address anticipated regulatory changes, and ensure capacity for anticipated new development and redevelopment through the year 2020.

One final note of caution is warranted, however. While our confidence level in capital construction and financing over the first six years is high, estimates beyond to the year 2020 become more uncertain. We have presented Council with the best and most accurate projections our engineering and financial consultants, and staff have been able to produce. Please recognize that longer term changes in the rate of deterioration of existing infrastructure, future unanticipated regulatory changes, or unpredictable changes in the economy...alone or in combination...could dramatically alter the picture in the out years. Continuing to update our projections every three years should help us to make any mid-course corrections, however.

Staff will be prepared to discuss these issues further at the April 5th Council Work Study Session, and will be prepared to answer any questions at that time. Please contact me if you have any questions, or need any additional information prior to the meeting.

Water Utilities Department

Integrated Master Plan

*Water and Wastewater
Capital Improvement Program*

*Rate and Development Fee
Impact Study*

**City Council Study Session Presentation
April 5, 2001**

Today's Presentation

- Review previous Council direction
- Proposed CIP from *Integrated Master Plan*
- Water Utility development fees
- Water Utility rates
- Recommendations
- Council direction
- Questions

Policy Direction Given

■ What growth scenario should we plan for?

× General Plan 2020?

... or ...

/ General Plan 2020+?

Policy Direction Given

- Should we minimize customer impacts with incremental annual rate adjustments?

✓ Yes

✗ No

Policy Direction Given

- Examine increases in development and/or impact fees to pay for growth related infrastructure costs driven by 2020+ intensity development.

Capital Improvement Program

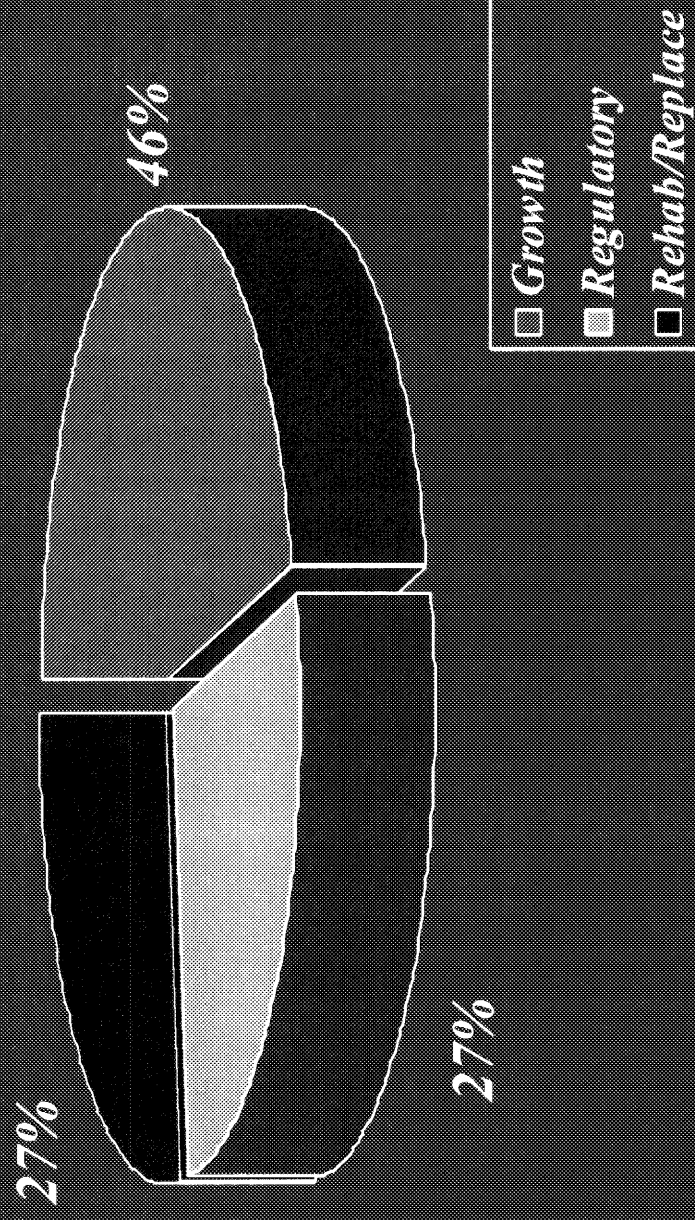
- Plant expansions/upgrades: JGMWTP, STWTP, KWRF
- 91st Avenue WWTP expansions/upgrades
- Water transmission system upgrades
- Wastewater collection system upgrades
- New production wells
- Address regulatory compliance impacts
- Rehabilitate or replace aging facilities

Capital Improvement Program

- 5-Year planning horizon needed to meet projected demands when they occur
- Proposed program meets all projected needs and provides for 2020+ level of development
- Proposed program: \$183 million to Tempe over the next 6-years.

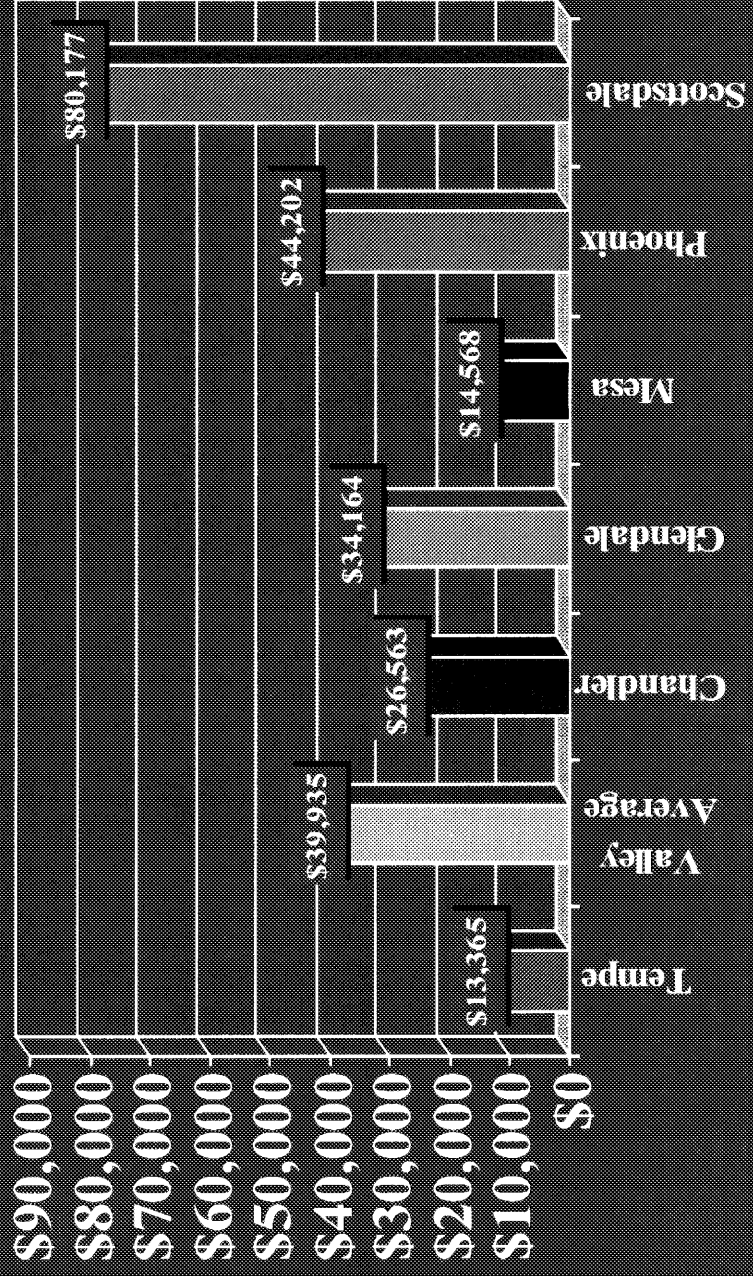
Capital Improvement Program

*Current 6-Year CIP Request
\$183 Million*



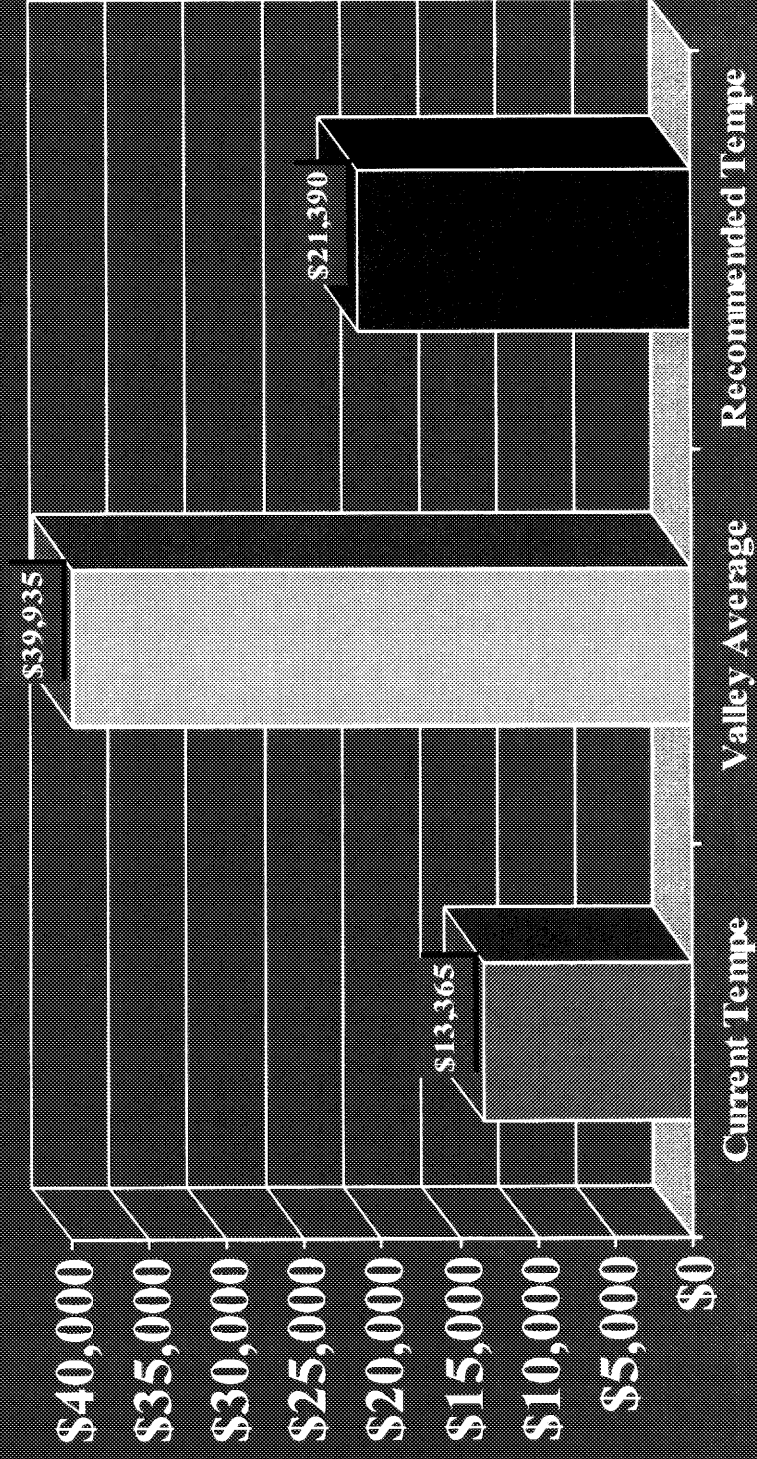
Water Utility Current Development Fees

2" Commercial



Water Utility Development Fee Recommendations

2" Commercial



Residential Utility Rates

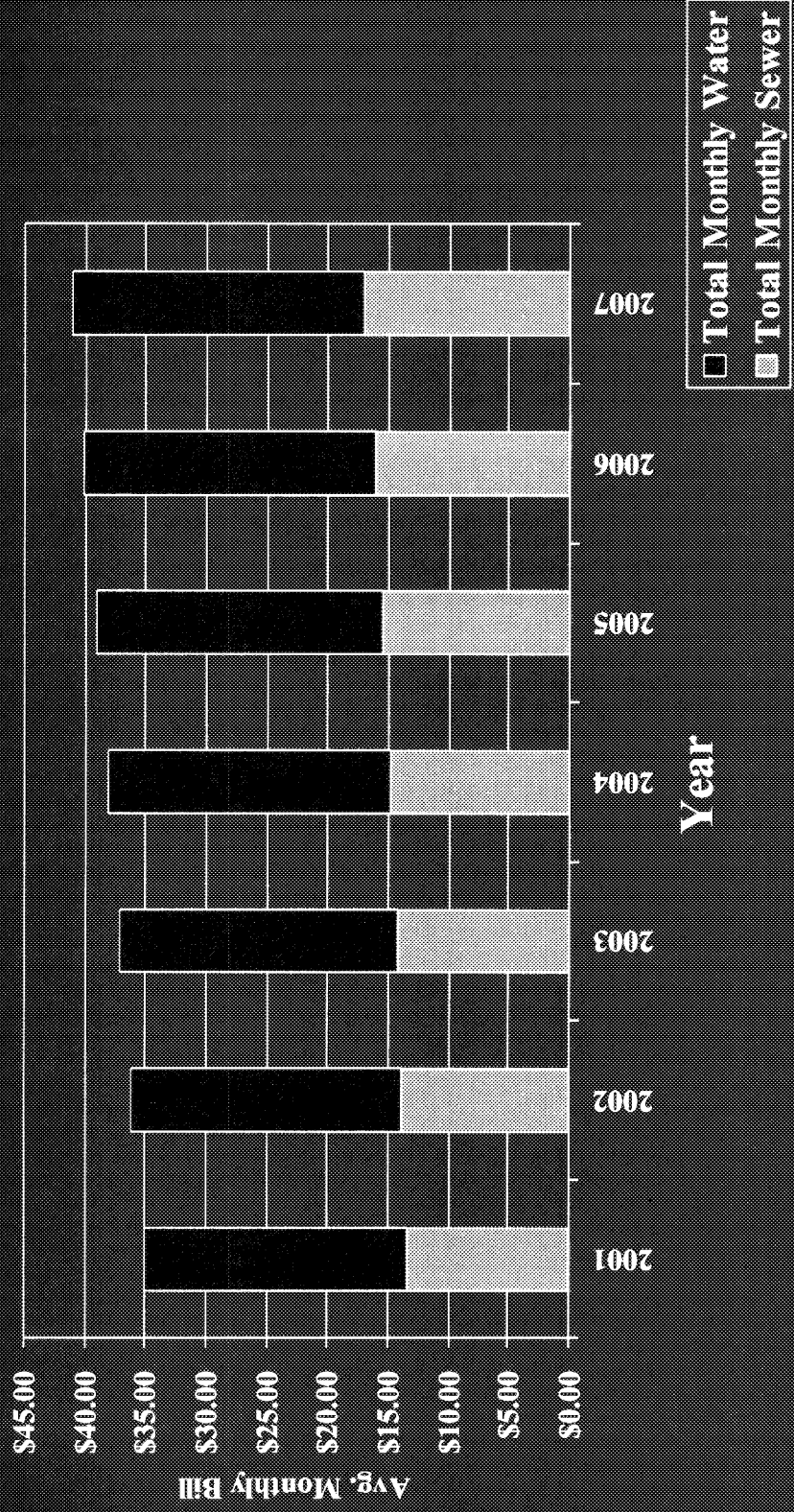
- Currently Tempe's W/WW rates are the lowest in the Valley
- Recent rate adjustments
 - ◆ 1999 - 2% on sewer
 - ◆ 1997 - 6% on sewer (revenue neutral adjustment on water)
 - ◆ 1994 - 4% on water and 4% on sewer

Residential Utility Rates

- The programmed rate adjustments to fully fund the proposed Capital Improvement Program: < 2.5% annual increase on the total water/sewer bill (note: adjustments on sewer may be slightly higher than on water)

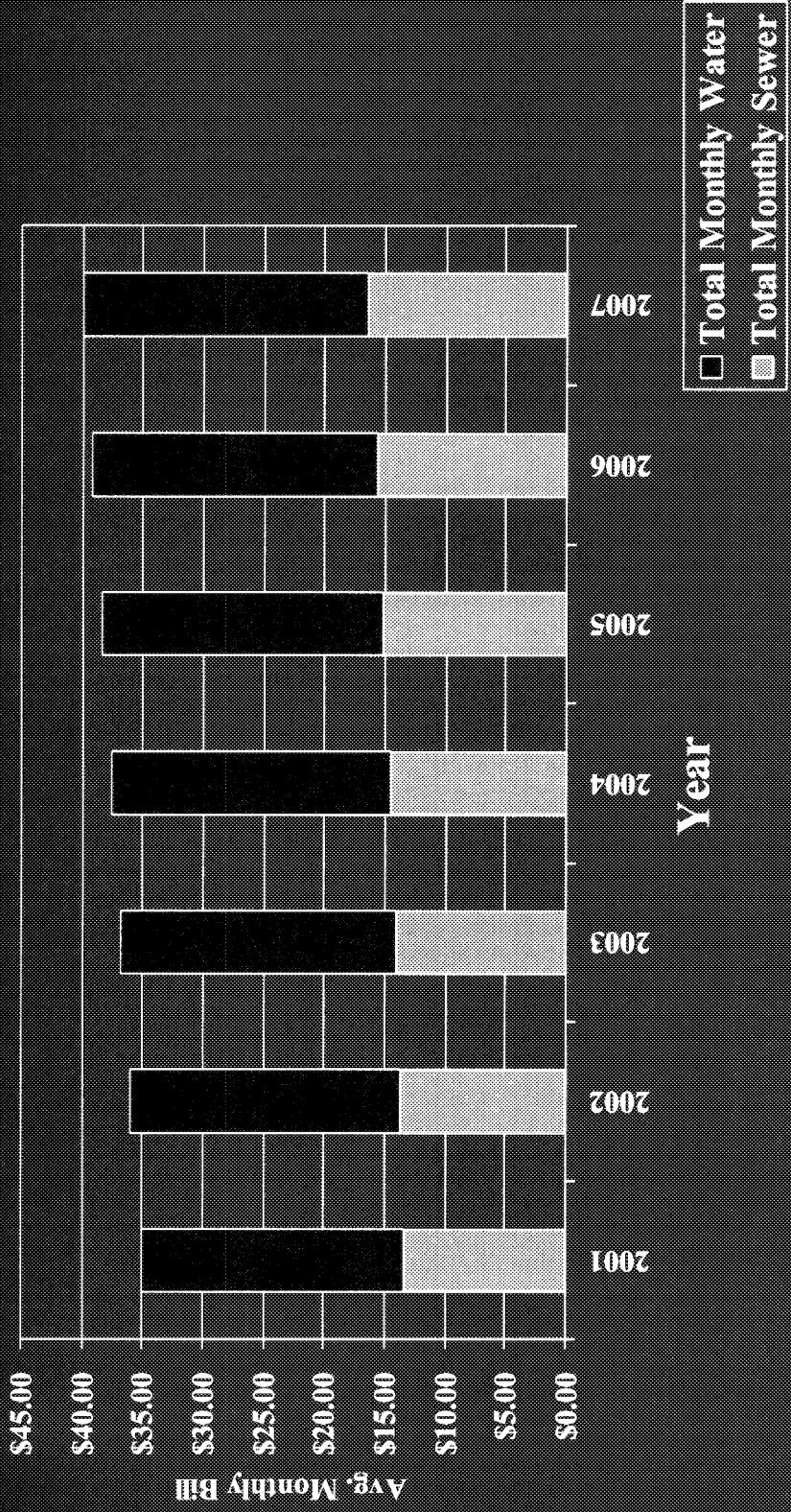
Residential Utility Rates

Scenario 1: No Development Fee Adjustment



Residential Utility Rates

Scenario 2: 57% Average Increase in Development Fees



Recommendations

- Increase development fees an average of 57% ... growth pays for growth
- Implement small, annual rate adjustments of approximately 2.5% or less on the total W/WW bill ... all customers pay for rehabilitation, replacement and regulatory compliance
- Cost impact to the average residential household estimated at < \$10 per year on the total W/WW bill
- Update the *IMP*, development fees and rates on a regular schedule

Policy Direction Needed

■ Is the proposed Water/Sewer Capital Improvement Program acceptable as presented?

Policy Direction Needed

■ Staff is recommending an approximate 57% increase in Water/Sewer Development Fees to cover growth-related costs in this Capital Improvement Program. Can staff move forward with this process to enact such development fee increases?

Policy Direction Needed

■ Staff is recommending approximate annual 2 - 3% rate increases on the total water/sewer bill. We would like to proceed with an effective target date of November/December of this year, for the first annual increase. Can staff move forward with the rate adjustment process?

Policy Direction Needed

■ Staff would like to propose that future rate adjustments be considered on a biennial basis, concurrent with consideration of biennial operating and capital Water Utilities Department budget requests. Is this agreeable to the Council?

Questions ?

INTEGRATED MASTER PLAN

VOLUME I EXECUTIVE SUMMARY



WATER UTILITIES DEPARTMENT
CITY PROJECT # 966673

FEBRUARY 2001

Malcolm Pirnie, Inc.
432 N. 44th Street, Suite 400
Phoenix, Arizona 85008

In association with

Wilson & Company
9633 S. 48th Street, Suite 290
Phoenix, Arizona 85044

KVL Consultants, Inc.
11026 E. Verbena Lane
Scottsdale, Arizona 85259

PREFACE

In November, 1998, the City of Tempe, Arizona retained Malcolm Pirnie, Inc., in association with Wilson & Company and KVL Consultants, Inc., to prepare an *Integrated Master Plan*. The work includes master plans for potable water treatment and distribution, wastewater collection, and storm water collection and conveyance.

The *Integrated Master Plan* is presented in the following documents:

Volume I	Executive Summary
Volume II	Water Master Plan
Volume III	Wastewater Master Plan
Volume IV	Storm Water Master Plan

This document is Volume I – Executive Summary.

RECOMMENDED WATER AND WASTEWATER SYSTEM IMPROVEMENTS

Water and wastewater system improvements are recommended to accommodate projected City of Tempe buildout conditions. The recommendations total nearly \$212 million in capital expenditures, \$99.4 million for water system improvements and \$112.4 million for wastewater system improvements. The recommended water and wastewater system improvements and cost schedules for use in developing the utility system Capital Improvement Program (CIP) are summarized on Table ES-1. *It should be noted that the schedules were developed for capital budgeting purposes at the time of publication of this report. The schedules are subject to refinement as the City develops its utility system CIP.*

Water System Improvements

The following major water system improvements (in addition to miscellaneous piping and other facility improvements and modifications) are recommended to meet projected water demands:

- **Expand Johnny G. Martinez Water Treatment Plant (JGM WTP):** A 30 mgd expansion of the JGM WTP (50 mgd current capacity), including 12 million gallons of new reservoir storage. The expansion will require a study to identify an expansion plan for the relatively confined plant site.
- **Expand South Tempe WTP:** A 20 mgd expansion of the South Tempe WTP (40 mgd current capacity), including 22 million gallons of new reservoir storage.
- **New Production Wells:** Approximately 23 mgd of additional production capacity from seven new wells to address immediate needs related to system storage and emergency production capacity.
- **Redefine Sende Vista Pressure Zone:** Redefinition of the Sende Vista Pressure Zone to correct pressure problems in the system.
- **Redefine McKellips Pressure Zone:** Redefinition of the McKellips Pressure Zone to correct pressure problems in the system.

TABLE ES-1

RECOMMENDED SYSTEM IMPROVEMENTS AND COST SCHEDULE [1]

Item	Description	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	Capital Cost
WATER SYSTEM IMPROVEMENTS													
Projects Based on Current System Needs													
1	Production Wells												
	- Redevelop Well No. 13	625,000											625,000
	- New Well No. 14		312,500	937,500									1,250,000
	- New Well No. 15	100,000	312,500	937,500									1,350,000
	- Connect SRP well as Well No. 16	100,000											100,000
	- Connect SRP well as Well No. 17	100,000											100,000
	- New Well No. 18								312,500	937,500			1,250,000
	- New Well No. 19								312,500	937,500			1,250,000
2	Redefine McKellips Pressure Zone												
	- 1.1 mgd Booster Station	62,500	187,500										250,000
	- Valves and piping	2,500	7,500										10,000
3	Redefine Sende Vista Pressure Zone												
	- 0.7 mgd Kyrene Booster Expansion	100,000	300,000										400,000
	- Valves and Piping	12,500	37,500										50,000
Total Current Needs Projects		\$ 1,102,500	\$ 1,157,500	\$ 1,875,000	\$ -	\$ -	\$ -	\$ -	\$ 625,000	\$ 1,875,000	\$ -	\$ -	\$ 6,635,000
Projects Based on Buildout Needs													
1	Expand JGM WTP												
	- Site Study	500,000											500,000
	- 30 mgd Production Capacity		8,850,000	13,275,000	13,275,000								35,400,000
	- 12 MG Reservoir Expansion		1,675,000	2,512,500	2,512,500								6,700,000
	- 4,600 lf - 54-inch Pipe		620,000	930,000	930,000								2,480,000
	- 2,500 lf - 36-inch Pipe		175,000	262,500	262,500								700,000
2	Expand South Tempe WTP												
	- 20 mgd Production Capacity					5,900,000	8,850,000	8,850,000					23,600,000
	- 27 MG Reservoir Expansion					2,650,000	3,975,000	3,975,000					10,600,000
3	Hohokam Reservoir												
	- 7 MG Reservoir									950,000	2,850,000		3,800,000
	- 11 mgd Booster Station									600,000	1,800,000		2,400,000
	- 5,000 lf - 30" Pipe									275,000	825,000		1,100,000
4	Kyrene Booster Station Expansion												
	- 11 mgd Capacity Expansion									500,000	1,500,000		2,000,000
	- 4,200 lf - 24" Pipe									145,000	435,000		580,000
5	New Interconnection with Chandler [2]												
	- 5,300 lf - 24"		182,500	547,500									730,000
	- 7,200 lf - 30"						397,500	1,192,500					1,590,000
Total Buildout Needs Projects		\$ 500,000	\$ 11,502,500	\$ 17,527,500	\$ 16,980,000	\$ 8,550,000	\$ 13,222,500	\$ 14,017,500	\$ -	\$ -	\$ 2,470,000	\$ 7,410,000	\$ 92,180,000
Rehabilitation/Replacement Projects													
1	Replace 12" pipe in Alameda from 48th Street to I-10	250,000											250,000
Total Rehab/Replacement Projects		\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000
Integrated Master Plan Update						300,000							\$ 300,000
WATER SYSTEM TOTALS		\$ 1,852,500	\$ 12,660,000	\$ 19,402,500	\$ 16,980,000	\$ 8,850,000	\$ 13,222,500	\$ 14,017,500	\$ 625,000	\$ 1,875,000	\$ 2,470,000	\$ 7,410,000	\$ 99,365,000

TABLE ES-1

RECOMMENDED SYSTEM IMPROVEMENTS AND COST SCHEDULE [1]

Item	Description	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	Capital Cost
WASTEWATER SYSTEM IMPROVEMENTS													
Projects Based on Build-Out Needs													
1	91st Avenue Expansion IVA (4.5 MGD)	1,000,000	3,345,250	6,517,875	6,517,875	3,379,750	5,069,625	5,069,625					17,381,000
2	91st Avenue Expansion IVB (3.5 MGD)					4,480,000	4,480,000	4,480,000					13,519,000
3	Transmission Capacity to 91st Avenue			4,480,000	4,480,000	4,480,000	4,480,000	4,480,000					22,400,000
4	KRF Expansion to 10 MGD	3,125,000	4,687,500	4,687,500	3,125,000	4,687,500	4,687,500						25,000,000
5	15" on Scottsdale Road north of Curry									108,000			108,000
6	15" on 1st Street east of Farmer Avenue to Mill Avenue	338,000											338,000
7	12" on Farmer Avenue south of 1st Street		356,000										356,000
8	21" on Broadway Road west of Dorsey Lane and north on Rural Road to Spence Drive										1,429,000		1,429,000
9	42" SAI west of McClintock Dr. and east of Mill Avenue [4]		1,449,750	4,349,250									5,799,000
10	48" along Western Canal from Kyrene/Baseline Road to Priest Drive and north to Southern Avenue [4]								1,405,500	4,216,500			5,622,000
11	30" on Guadalupe Rd. east of Kyrene Road to KRF (Influent)									935,000			935,000
12	42" Guadalupe Rd. west of Rural Rd. to KRF (Influent)			2,958,000									2,958,000
13	36"/21" Rural Road north of Bell De Mar Drive to Guadalupe Road			162,000									162,000
14	15" Palomino Drive east of McClintock Drive										587,000		587,000
15	15" Carver Road west of Kyrene Road (1st Parcel)					1,000,000							1,000,000
Total Build-Out Needs Projects		\$ 4,463,000	\$ 9,838,500	\$ 23,154,625	\$ 14,122,875	\$ 13,547,250	\$ 14,237,125	\$ 9,549,625	\$ -	\$ 1,405,500	\$ 7,275,500	\$ -	\$ 97,894,000
Rehabilitation/Replacement Projects													
1	15" on Mill Avenue north and south of Broadway Road								362,000				362,000
2	Priest Dr. / Southern Ave. Diversion Structure [4]	750,000											750,000
3	SAI Rehab Project - Phase 1 [3, 4]	858,750	2,576,250			2,229,375	2,229,375						3,435,000
4	SAI Rehab Project - Phase 2 [3, 4]				1,486,250								5,945,000
5	SAI Rehab Project - Phase 3 [3, 4]							1,074,250	1,074,250	1,074,250	1,074,250		4,297,000
Total Rehab/Replacement Projects		\$ 1,608,750	\$ 2,576,250	\$ -	\$ 1,486,250	\$ 2,229,375	\$ 2,229,375	\$ 1,074,250	\$ 1,436,250	\$ 1,074,250	\$ 1,074,250	\$ -	\$ 14,789,000
WASTEWATER SYSTEM TOTALS		\$ 6,071,750	\$ 12,414,750	\$ 23,154,625	\$ 15,609,125	\$ 15,776,625	\$ 16,466,500	\$ 10,623,875	\$ 1,436,250	\$ 2,479,750	\$ 8,349,750	\$ -	\$ 112,383,000
GRAND TOTALS													
GRAND TOTALS		\$ 7,924,250	\$ 25,074,750	\$ 42,557,125	\$ 32,589,125	\$ 24,626,625	\$ 29,689,000	\$ 24,641,375	\$ 2,061,250	\$ 4,354,750	\$ 10,819,750	\$ 7,410,000	\$ 211,748,000

Notes:

- All costs are in 2000 dollars and include 2.5 percent for contingencies. *Schedules were developed for budgeting purposes and are subject to refinement as the City develops its utility system CIP.*
- All costs will be paid by Chandler.
- Joint projects with the City of Mesa. Costs shown are total project costs. Costs will most likely be split with Mesa.
- Cost included from Brown and Caldwell, Unlined Concrete Sewers Condition Assessment Program, Table D-4, August, 1999.

- **Kyrene Booster Station Expansion:** An 11 mgd expansion of the Kyrene Booster Station to accommodate increasing demands in the Sende Vista Pressure Zone.
- **Hohokam Reservoir:** Construction of a new 7 million gallon Hohokam Reservoir near the Salt River and Hohokam Expressway. As an alternative, this reservoir can be replaced with new well capacity if the City determines in the future that groundwater of sufficient quality is available in the area.

Wastewater System Improvements

The following major wastewater system improvements (in addition to miscellaneous piping and other facility improvements and modifications) are recommended to manage projected wastewater generation:

- **91st Avenue Wastewater Treatment Plant (WWTP) IVA Expansion:** Participation of 4.5 mgd in the next 91st Avenue WWTP expansion to procure new treatment capacity for near-term needs (22.5 mgd current capacity).
- **91st Avenue WWTP IVB Expansion:** Participation of 3.5 mgd in a future 91st Avenue WWTP expansion to provide for long-term needs.
- **Procure Transmission Capacity to 91st Avenue WWTP:** Procure additional Salt River Outfall (SRO) and Southern Avenue Interceptor (SAI) capacity to convey projected flows exceeding the current purchased capacities in these facilities. The City needs to acquire 4 to 5 mgd of additional capacity in the SRO east of Priest Drive and 7 to 8 mgd west of Priest Drive, and it needs to acquire 0.3 mgd of additional capacity in the SAI upstream of the Priest Diversion.
- **Expand Kyrene Reclamation Facility (KRF):** A 5.5 mgd expansion of the KRF (4.5 mgd current capacity) to handle growth in service area wastewater generation, provide treatment capacity for seasonal peak flows, and to increase the reliability of the plant.

INTEGRATED MASTER PLAN PROJECT

Background

The City's General Plan 2020 reaffirms the City's commitment to creating and sustaining a quality environment for its citizens and businesses. Because the City is

landlocked and has nearly reached saturation development, the General Plan emphasizes the need to transition from a community of growth through development to a *community of growth through redevelopment*. This will impact the existing water distribution, sanitary sewer and storm drain systems. Managing costs associated with infrastructure redevelopment will be one of the biggest challenges facing the Public Works and Water Utilities Department staffs over the next twenty years. Computer modeling tools will be necessary for planning maximum use of existing utilities while minimizing the costs required to serve the anticipated growth.

Purpose and Scope

To plan for anticipated growth, the City commissioned the *Integrated Master Plan* (IMP) project to develop master planning documents and tools to help guide water, wastewater and storm water system improvements through redevelopment and buildout. The IMP project included the following general objectives:

- Develop computer models of the water, wastewater, and storm water systems that make full use of the City's existing geographic information system (GIS) database, and that fully recognize the operations and capabilities of the existing infrastructure.
- Supplement the City's existing water resources master plan by identifying additional infrastructure that will enable the City to provide sufficient water supplies during short-term, emergency water shortage situations.
- Develop master plans that consider integration of the IMP systems and other innovative/entrepreneurial opportunities that could enhance future operations.
- Develop recommended capital costs and cost expenditure schedules that consider infrastructure to accommodate new development and redevelopment, and rehabilitation and/or replacement of aging system components.
- Develop an integrated financial model that will allow the City to assess the budget and revenue impacts of alternative IMP capital and/or operation and maintenance (O&M) improvements or modifications.

Deliverables and Planning Tools

The IMP project resulted in the following planning documents and tools:

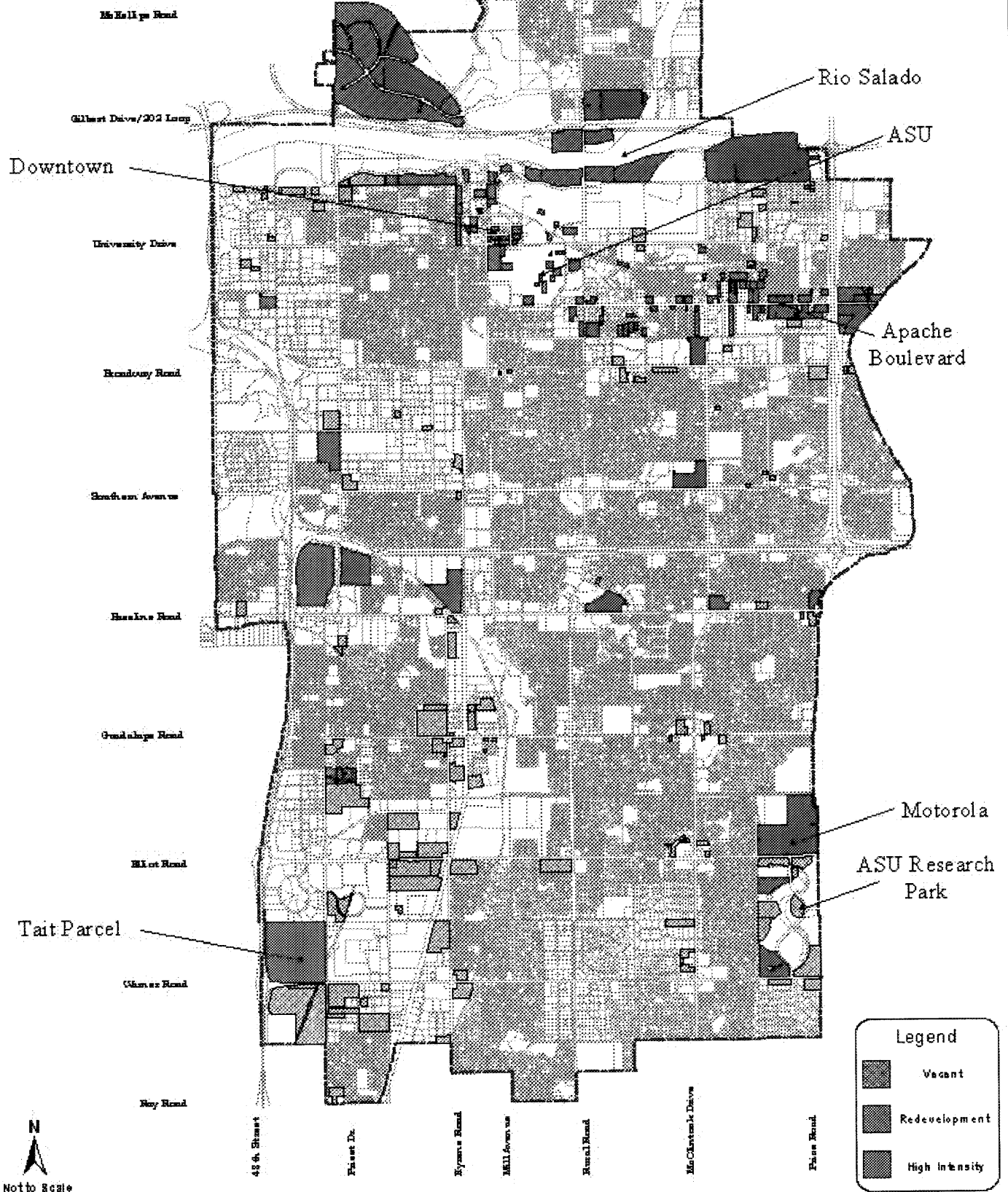
- A steady-state calibrated SynerGEE water system hydraulic model.
- A dynamic Pipedream wastewater system hydraulic model.
- A storm water system hydrologic and hydraulic model customized for evaluating the City's unique storm water management infrastructure that utilizes significant onsite storage. The model also includes a module that will assist in developing National Pollutant Discharge Elimination System (NPDES) reporting documentation.
- Water and Wastewater Master Plans describing recommended system improvements, costs and schedules. The Water Master Plan incorporates system improvements to enhance the ability to supply water during short-term, emergency water shortage situations. Both master plans include strategies for replacement/rehabilitation of infrastructure that are aged or require frequent maintenance. The master plans result in an integrated schedule of system improvement costs for use in the City's utility system CIP.
- A Storm Water Master Plan describing the existing watershed hydrology and infrastructure, and identifying potential problem areas. There were no required system improvements identified for the storm water system.
- A spreadsheet Financial Model which forecasts the budget and revenue impacts of alternative IMP capital and/or O&M improvements or modifications.

The computer models will allow City staff to conduct "*what if*" analyses in order to evaluate impacts of development planning, to optimize use of the utility system capacities, and to provide a continuing basis for development of the utility system CIP.

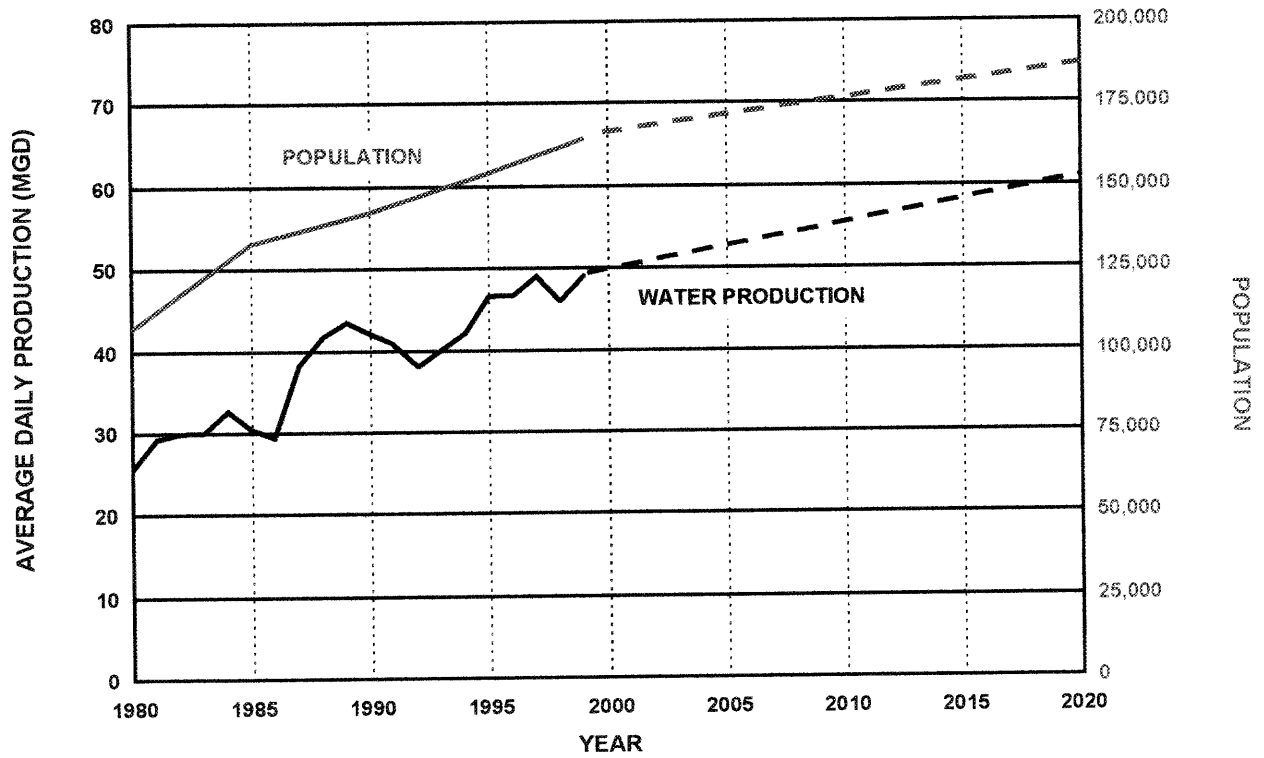
Report Arrangement

The IMP report is organized as follows:

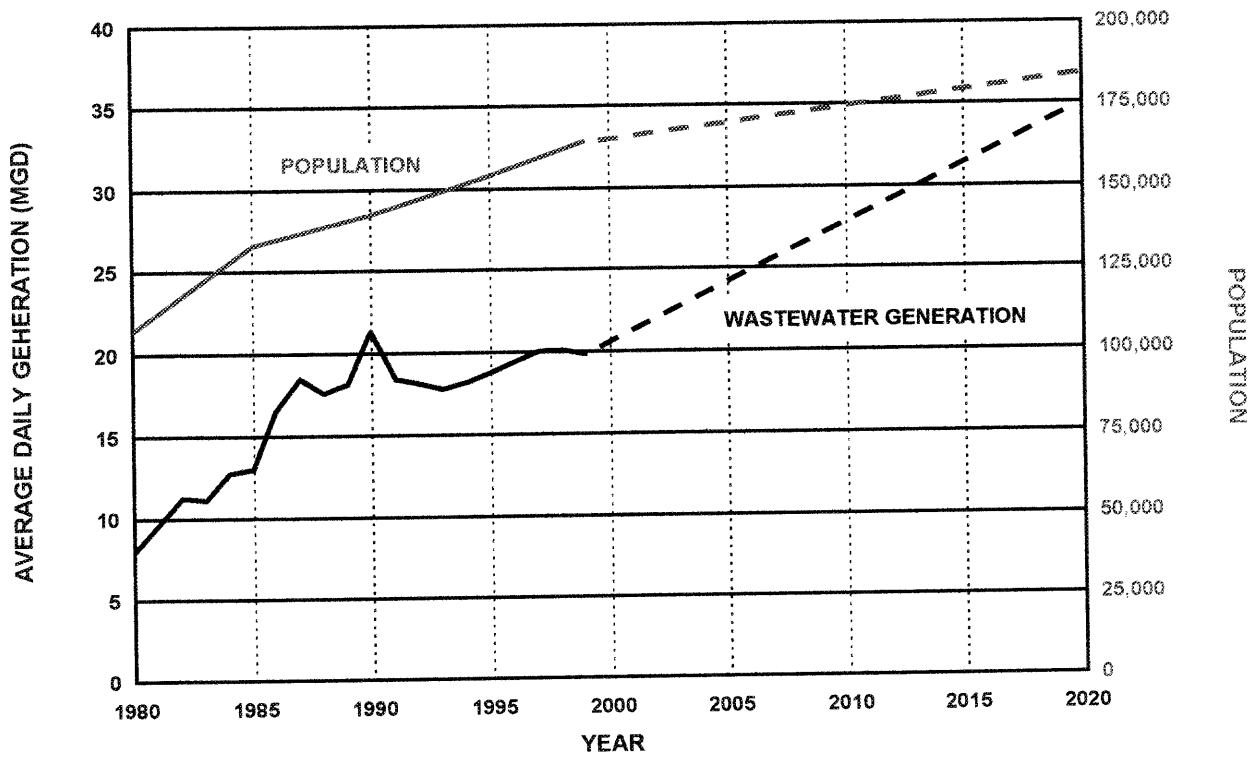
- **Volume I: Executive Summary.** The Executive Summary provides a concise overview of the recommendations, findings and results of all the tasks included in the IMP project.



WATER PRODUCTION



WASTEWATER GENERATION



Water and Wastewater

Development Fee

Comparison

City of Tempe

Water Utilities Department

January, 2001

INTRODUCTION

Water Management Division (WMD) has developed an Integrated Master Plan (IMP) to identify water and wastewater infrastructure and treatment capacity requirements to meet forecasted demands over the next 20 years. The IMP addresses improvements and expansion of facilities for the primary operations supported by the utility: water, wastewater, storm water, and flood irrigation.

Development fees, or impact fees, are fees charged to new utility customers to offset, or partially offset, the capital cost of treatment and infrastructure expansion required for future growth and development. With the IMP document as a guide for the utility's future capital improvement program (CIP), the revenue requirement to support the capital cost of utility service can be determined. An analysis of the revenue requirement associated with growth and expansion, and the revenue required to support ongoing infrastructure rehabilitation and replacement will be necessary to determine what portion of required revenue may be collected through either development fees or monthly charges.

Tempe's development fees are currently among the lowest in the Valley. To remain competitive with other Valley cities, it may be necessary to strike a balance between capital cost recovery through development fees and cost recovery through monthly charges. A comparison of water and wastewater development fees charged by neighboring cities with similar capacity demand and growth issues may provide useful information to help achieve that balance.

MARKET COMPARISON

Development fees charged by the Cities of Chandler, Glendale, Mesa, Phoenix, and Scottsdale are reviewed and compared to those charged by the City of Tempe. These cities, with the exception of the City of Chandler, are SROG (Sub-regional Operating Group) member Cities and, like Tempe, support at least part of their wastewater program through the SROG owned and operated 91st Avenue WWTP. The City of Chandler was also selected for this comparison because it is a potential partner in Tempe's expansion of water treatment facilities, as identified in the IMP. All five cities in the comparison are experiencing significant growth and expansion of their utility service demand due to continued economic growth, development, and redevelopment in their service areas. While Tempe continues to develop the remaining vacant land within its service area, growth in utility service demand is largely related to redevelopment with more intensive and higher density development projected for the future.

Because the fee structure in each individual city varies widely, it is necessary to make a number of assumptions to develop a valid comparison. For example, Glendale's fees for commercial customers are based on square footage of buildings and Scottsdale's fees are based in part on lot size. Tempe's fee structure is based on dwelling units for single family and multifamily residential customers, and on meter size for commercial

and industrial customers. Each city's fees are compared on that basis and are summarized below. Assumptions required to compare development fees based on Tempe's fee structure are also noted.

Finally, each city's fees estimated in this comparison reflect fees for a typical customer based on the noted assumptions, but may vary for any given specific customer. Applicable offsets, deductions for connection fees and other adjustments have been incorporated in this analysis to the extent possible. However, adjustments applicable to a specific customer in each city may differ from those used in this summary.

City of Chandler

The City of Chandler's development fees are structured similarly to Tempe's with the following exception. Part of the water development fee for 3-inch and larger meters is based on estimated consumption. Chandler's consumption estimate of 37,372 gpd and 42,896 gpd was assumed in this analysis for 3- and 4-inch meters, respectively. City of Chandler development fees are summarized in the table below. It is important to note that the City of Chandler expects to adjust these fees effective February, 2001.

City of Chandler Development Fees (dollars)

	Water System	Water Resource	Water Total	Wastewater System	Reclaimed Water	Wastewater Total	Total
Residential*							
Single Family	1,312	373	\$1,685	1,091	197	1,288	2,973
Multi-family	801	248	\$1,049	774	140	914	1,963
Commercial							
5/8-inch	1,312	373	\$1,685	1,091	197	1,288	2,973
3/4-inch	1,968	817	\$2,785	1,637	295	1,932	4,717
1-inch	3,279	1,103	\$4,382	2,727	491	3,218	7,600
1-1/2 -inch	6,559	2,840	\$9,399	5,455	982	6,437	15,836
2-inch	10,495	5,768	\$16,263	8,729	1,571	10,300	26,563
3-inch	22,956	33,999	\$56,955	19,094	3,435	22,529	79,484
4-inch	32,795	39,025	\$71,820	27,277	4,909	32,186	104,006

* Residential charges are per dwelling unit.

City of Glendale

Residential development fees are based on number of dwelling units, like those in Tempe. However, fees for commercial and industrial customers are based on square footage of floor area and type of use. For comparative purposes, it is necessary to assume building size and type of use appropriate to meter size. Square footage assumptions are based on Tempe planning parameters of people per square feet and consumption per person, related to meter size.

For a commercial 1-inch meter, a retail facility of 10,000 square feet is assumed. For a 2-inch meter, an office building of 36,000 square feet is assumed. Fees for a 3-inch meter are based on 78,750 square feet of office space. Fees for a 4-inch meter are based on 135,000 square feet of office space.

Development fees for the City of Glendale, converted to a meter size basis are summarized in the table below.

City of Glendale Development Fees (dollars)

	Water	Wastewater	Total
Residential*			
Single Family	1,367	2,003	3,370
Multi-family	524	1,370	1,894
Commercial			
1-inch	4,540	8,710	13,250
2-inch	11,664	22,500	34,164
3-inch	25,515	49,219	74,734
4-inch	43,740	84,375	128,115

* Residential charges are per dwelling unit.

City of Mesa

The City of Mesa's development fee structure is consistent with that used in Tempe, and is summarized in the table below. Residential fees are based on the number of dwelling units. Commercial and industrial fees are based on meter size. The City of Mesa may adjust these fees in September, 2001.

City of Mesa Development Fees (dollars)

	Water	Wastewater	Total
Residential*			
Single Family	901	920	1,821
Multi-family	640	653	1,293
Commercial			
5/8 inch	901	920	1,821
1 inch	2,253	2,300	4,553
1-1/2 inch	4,505	4,600	9,105
2 inch	7,208	7,360	14,568
3 inch	14,416	14,720	29,136
4 inch	22,525	23,000	45,525
6 inch	45,050	46,000	91,050

* Residential charges are per dwelling unit.

City of Phoenix

Single family residential development fees in the City of Phoenix are assessed on a dwelling unit basis, as in Tempe. However, development fees for multifamily residential customers are based on the same structure used for commercial customers. For these customers, the water development fee is based on meter size equivalents, with a 5/8-inch meter equal to one meter equivalent. The wastewater development fee is based on the number of sewer fixture units.

For comparative purposes, the development fee for multifamily customers assumes that, on a dwelling unit basis, the fees are equivalent to single family customers. Fees for commercial customers using the larger meters assume the same ratio of meter equivalents to fixture units inherent in the single family residential customer classification. For example, a 2-inch meter is equal to eight meter equivalents for the water developments fee, and is assumed to also have eight times as many fixture units for the wastewater development fee.

Phoenix has identified fees for specific areas or zones within its boundaries that reflect varying capital costs for expansion of facilities necessary to accommodate growth and development projected for that zone. Some areas that are no longer experiencing growth have no development fees. An area in the northern part of the City which is experiencing growth was used for this comparison, summarized below.

City of Phoenix Development Fees (dollars)

	Water	Wastewater	Total
Residential*			
Single Family	2,427	1,337	3,764
Multi-family	2,427	1,337	3,764
Commercial			
5/8-inch	2,427	1,937	4,364
1-inch	7,278	5,575	12,853
1-1/2 -inch	15,323	11,637	26,960
2-inch	25,290	18,912	44,202
3-inch	45,623	35,887	81,510
4-inch	95,083	72,262	167,345

* Residential charges are per dwelling unit.

City of Scottsdale

City of Scottsdale residential development fees are based on a combination of square footage of a “lot building envelope” related to density and consumption assumptions. Scottsdale also identifies zones within the City that reflect significantly different capital cost to provide utility service. Fees for the northern zones B-E are assumed for this analysis. Fees for the southern area in Scottsdale are not used in this comparison because that area is not experiencing significant growth, development, or redevelopment.

For comparative purposes, single family residential development fees are based on lot size of 7,000 to 8,499 sq. ft. and multi-family residential fees are based on a lot size of 3,110 to 3,869 sq. ft. per dwelling unit.

Commercial development fees in Scottsdale are based on estimated consumption for each site. For comparative purposes, average consumption by meter size in Tempe is assumed. Based on these assumptions, estimated development fees for the City of Scottsdale are summarized in the table below.

City of Scottsdale Development Fees (dollars)

	Water System	Water Resource	Water Total	Wastewater Total	Total
Residential*					
Single Family	2,329	610	2,939	2,576	5,515
Multi-family	1,547	405	1,952	2,150	4,102
Commercial					
5/8-inch	947		947	3,821	4,767
3/4-inch	1,617		1,617	6,527	8,144
1-inch	2,836		2,836	11,446	14,282
1-1/2 –inch	7,126		7,126	28,766	35,893
2-inch	15,919		15,919	64,258	80,177
3-inch	37,242		37,242	150,329	187,571
4-inch	54,987		54,987	221,956	276,943

* Residential charges are per dwelling unit.

SUMMARY

Development fees charged by the Cities of Chandler, Glendale, Mesa, Phoenix, and Scottsdale are summarized in Table 1. Table 1 includes both nominal values (in dollars) for each category as well as variance (in percent) compared to fees charged by Tempe. The results of this analysis indicate that development fees in the City of Mesa, for water and wastewater combined, are most comparable to those in Tempe. Single family residential fees, on a dwelling unit basis, are just 1% higher at \$1,821. Multi-family fees are 28% lower, and commercial fees vary from -2% to +10%.

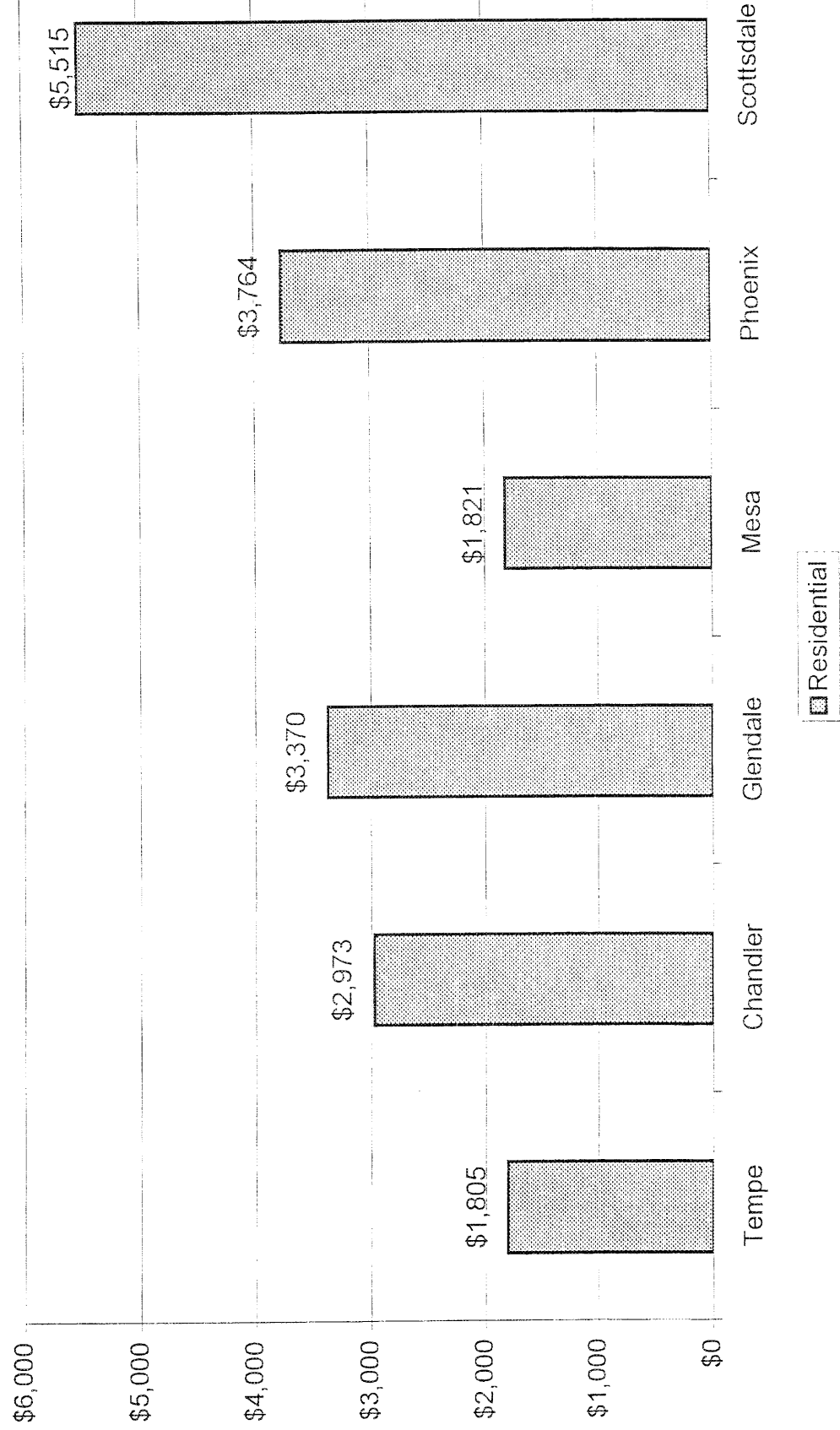
Development fees for the other cities in the comparison, for single family residential water and wastewater fees combined, vary from +65% in Chandler (\$2,973) to +206% in Scottsdale at (\$5,515). These results are illustrated graphically, as are results for one-inch and two-inch meters typically used by commercial customers.

Table 1. includes an average of the fees charged by the other cities along with percent variance compared to fees charged in Tempe. These results indicate that single family development fees, for water and wastewater combined are, on average, 93% higher than those charged in Tempe. Fees for the other categories vary from +44% to +242%.

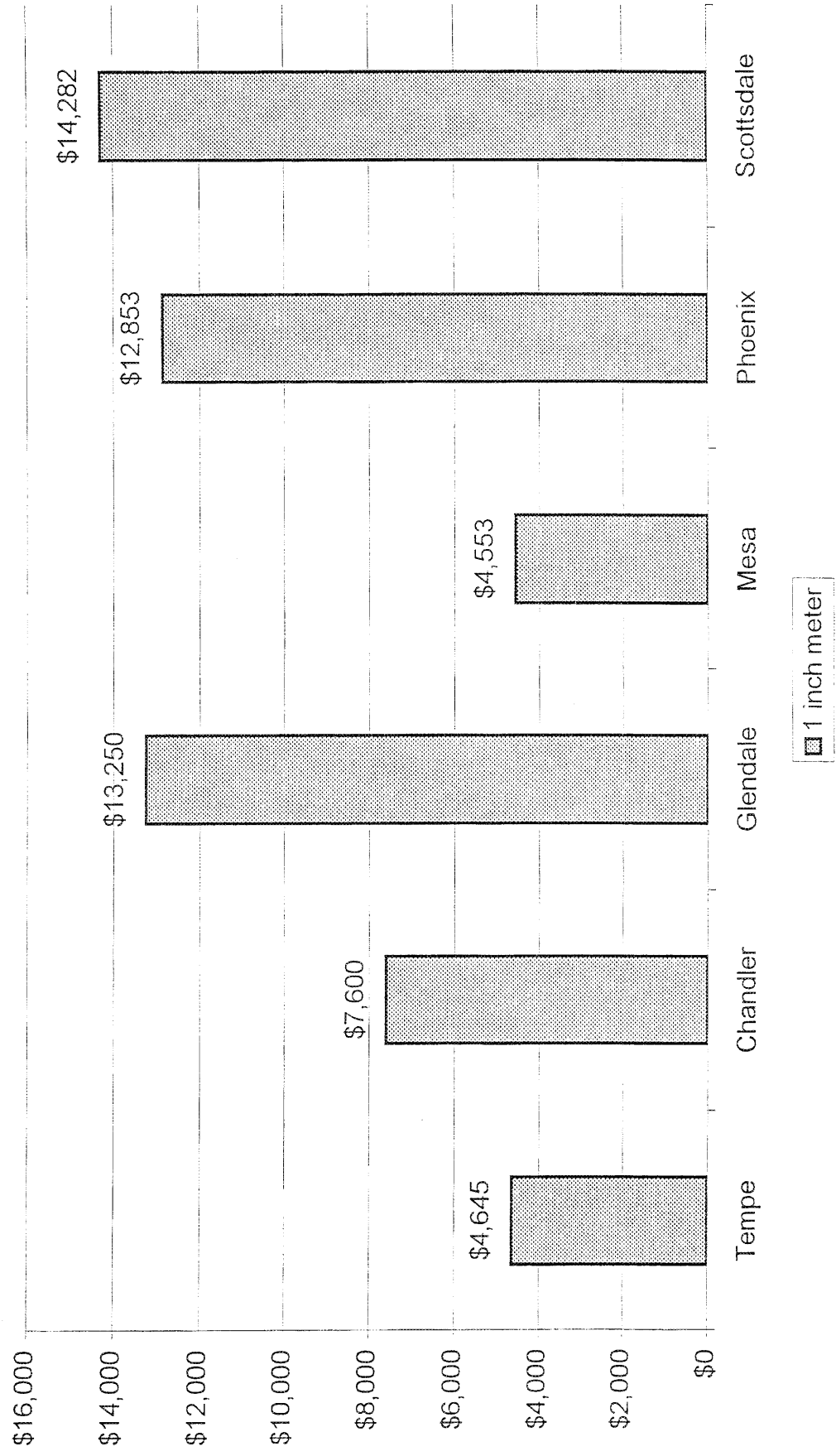
The wide variance in fees is indicative of the varying impact of growth and development in each city. The cost of acquiring water supplies, expanding water and wastewater treatment capacity, extending new and expanding existing infrastructure vary greatly in each city. Additionally, the philosophy and methodology utilized to recover expansion costs both have a dramatic impact on development fees. While most utilities attempt to fully allocate the cost of expanding facilities to accommodate new growth to development fees, some cities may recover part of these costs through monthly rates paid by all customers.

Finally, the analysis developed in this comparison of development fees is for informational purposes only, and is not intended to comprise a recommendation to adjust Tempe's fees based on those charged by the cities in this comparison.

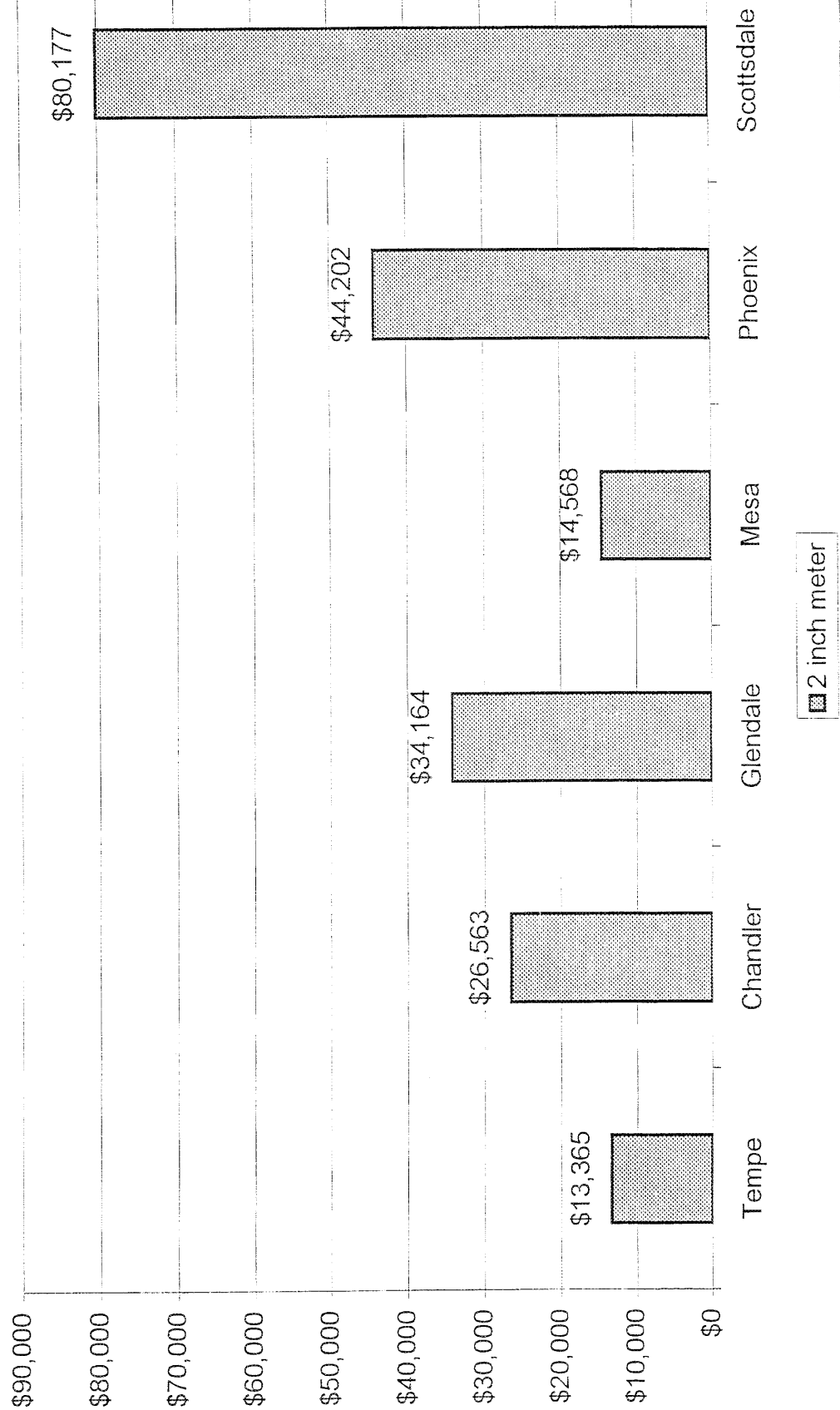
Residential Development Fees Water & Wastewater Combined



Development Fees - 1 inch meter Water & Wastewater Combined



Development Fees - 2 inch meter Water & Wastewater Combined



Development Fee / Impact Fee Comparison

Total	Chandler		Glendale		Mesa		Phoenix		Scottsdale	
	Water	Sewer	Water	Sewer	Water	Sewer	Water	Sewer	Water	Sewer
1,805	1,685	1,288	2,973	1,367	2,003	3,370	901	920	1,821	1,821
1,805	1,049	914	1,963	524	1,370	1,894	640	653	1,293	1,293
1,805	1,685	1,288	2,973	1,367	2,003	3,370	901	920	1,821	1,821
2,750	2,785	1,932	4,717	4,540	8,710	13,250	2,253	2,300	4,553	4,553
4,645	4,382	3,218	7,600	4,540	8,710	13,250	4,505	4,600	9,105	9,105
8,595	9,399	6,437	15,835	11,664	22,500	34,164	7,208	7,360	14,568	14,568
13,365	16,263	10,300	26,563	25,515	49,219	74,734	14,416	14,720	29,136	29,136
26,425	56,955	22,529	79,484	43,740	84,375	128,115	22,525	23,000	45,525	45,525
43,820	71,820	32,186	104,006				45,050	46,000	91,050	91,050
86,225										

Total	Chandler		Glendale		Mesa		Phoenix		Scottsdale	
	Water	Sewer	Water	Sewer	Water	Sewer	Water	Sewer	Water	Sewer
\$1,805	93%	38%	65%	56%	115%	87%	3%	-1%	1%	1%
\$1,805	20%	-2%	9%	-40%	47%	5%	-27%	-30%	-28%	-28%
\$1,805	93%	38%	65%	56%	115%	87%	3%	-1%	1%	1%
\$2,750	113%	34%	72%				7%	-10%	-2%	-2%
\$4,645	109%	26%	64%	116%	242%	185%	9%	3%	6%	6%
\$8,595	128%	44%	84%	82%	223%	156%	13%	6%	9%	9%
\$13,365	154%	48%	99%	102%	258%	183%	14%	7%	10%	10%
\$26,425	350%	64%	201%	102%	258%	183%	14%	7%	10%	10%
\$43,820	242%	41%	137%	108%	270%	192%	7%	1%	4%	4%

Total	Average Fee		Variance (%)	
	Water	Sewer	Water	Sewer
\$1,805	\$1,864	\$1,625	113%	75%
\$1,805	\$1,318	\$1,285	51%	38%
\$1,805	\$1,450	\$1,841	70%	98%
\$2,750	\$2,201	\$4,229	68%	194%
\$4,645	\$4,258	\$6,250	103%	146%
\$8,595	\$9,038	\$12,860	120%	188%
\$13,365	\$15,289	\$24,866	139%	254%
\$26,425	\$35,360	\$54,537	184%	296%
\$43,820	\$57,631	\$86,756	175%	280%

red projects reflect actual Tempe share	FY										Partner Total	Grand Total	Allocation		Growth
	2001/02	FY	FY	FY	FY	FY	FY	FY	FY	FY			Regulatory	Rehab	
ew Production Wells (5 Wells/19.3 MGD)	1,660,000	1,325,000	475,000	0	0	0	0	0	0	0	3,460,000	3,460,000	0	3,460,000	0
ylene Booster Zone	255,000	185,000	0	0	0	0	0	0	0	0	440,000	440,000	0	440,000	0
Plant Expansion (30 MGD) ¹	0	3,127,500	6,480,000	8,892,500	2,550,000	0	0	0	0	21,050,000	21,050,000	42,100,000	1,052,500	0	19,997,500
Waterline Improvements ¹	300,625	410,313	1,304,063	2,559,375	0	0	0	0	0	1,055,625	1,055,625	5,630,000	228,719	1,143,594	3,202,063
lant/Facility Expansion (20 MGD)	0	0	0	0	0	0	0	0	0	2,500,000	2,500,000	2,500,000	125,000	0	2,375,000
andler Delivery Connection (15 MGD) ²	0	0	0	0	0	0	0	0	0	2,320,000	2,320,000	2,320,000	0	0	0
ameda Waterline Replacement	250,000	0	0	0	0	0	0	0	0	0	250,000	250,000	0	250,000	0
update IMP	0	0	0	0	0	0	0	0	0	0	600,000	600,000	198,000	204,000	198,000
Replace Pre-sed Flights	150,000	150,000	0	0	0	0	0	0	0	0	300,000	300,000	0	300,000	0
Re-hab Existing Filters	0	3,000,000	0	0	0	0	0	0	0	3,000,000	3,000,000	3,000,000	0	3,000,000	0
Capital Equipment Replacement	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	900,000	900,000	900,000	0	900,000	0
Capital Equipment Replacement	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	900,000	900,000	900,000	0	900,000	0
omound Meter Replacement	350,000	350,000	350,000	0	0	0	0	0	0	1,050,000	1,050,000	1,050,000	0	1,050,000	0
utomated Meter Reading	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	3,000,000	3,000,000	3,000,000	0	3,000,000	0
istribution System Fittings	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	1,500,000	1,500,000	1,500,000	0	1,500,000	0
aterline Upgrades & Extensions	0	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	2,000,000	2,000,000	2,000,000	0	2,000,000	0
utomation Improvements	0	0	250,000	250,000	0	0	0	0	0	500,000	500,000	500,000	0	500,000	0
AP Capital Charge	199,000	199,000	199,000	199,000	199,000	199,000	199,000	199,000	199,000	1,194,000	1,194,000	1,194,000	0	1,194,000	0
evated Tank Rehabilitation	500,000	0	0	0	0	0	0	0	0	500,000	500,000	500,000	0	500,000	0
ects Subtotal	\$4,714,625	\$10,196,813	\$10,808,063	\$13,350,875	\$5,479,000	\$3,169,000	\$3,169,000	\$3,169,000	\$3,169,000	\$24,425,625	\$24,425,625	\$72,144,000	\$1,604,219	\$20,341,594	\$25,772,563
ue: Plant Expansion IVA (4.5 MGD)	2,400,000	6,200,000	15,300,000	3,800,000	0	0	0	0	0	27,700,000	27,700,000	27,700,000	5,540,000	0	22,160,000
ue: Plant Expansion IVB (3.5 MGD)	0	0	0	0	3,379,750	5,069,625	5,069,625	5,069,625	5,069,625	8,449,375	8,449,375	8,449,375	1,689,875	0	6,759,500
ue: CIP Excluding Expansions	7,604,000	8,508,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	36,112,000	36,112,000	36,112,000	24,374,709	11,297,561	439,730
ew Transmission to 91st Ave.	0	4,480,000	4,480,000	4,480,000	4,480,000	4,480,000	4,480,000	4,480,000	4,480,000	22,400,000	22,400,000	22,400,000	0	11,200,000	11,200,000
RF: Plant Expansion & Re-hab. (5 MGD + 5 MGD)	1,600,000	4,905,000	5,625,000	2,300,000	6,570,000	4,000,000	4,000,000	4,000,000	4,000,000	25,000,000	25,000,000	25,000,000	5,000,000	5,000,000	15,000,000
st Street 15" Farmer/Mill	147,000	191,000	0	0	0	0	0	0	0	338,000	338,000	338,000	0	0	338,000
Farmer Ave. 12" Sewer 1st Street to 7th Street	0	356,000	0	0	0	0	0	0	0	356,000	356,000	356,000	0	0	356,000
AI Rehabilitation - All Phases ³	429,375	2,013,000	2,174,625	743,125	1,114,688	1,114,688	1,114,688	1,114,688	1,114,688	7,589,500	7,589,500	15,179,000	0	5,692,125	1,897,375
ylene Influent Rural Rd.	0	0	461,000	2,497,000	0	0	0	0	0	2,958,000	2,958,000	2,958,000	0	0	2,958,000
ural Rd. 36"/21" Bell De Mar	0	0	162,000	0	0	0	0	0	0	162,000	162,000	162,000	0	0	162,000
arver 15" - Tait Parcel	0	0	0	0	1,000,000	0	0	0	0	1,000,000	1,000,000	1,000,000	0	0	1,000,000
AI Diversion Structure ³	750,000	0	0	0	0	0	0	0	0	750,000	750,000	1,500,000	0	750,000	0
RF: Reliability Upgrades	420,000	580,000	0	0	0	0	0	0	0	1,000,000	1,000,000	1,000,000	0	1,000,000	0
al LS: Pump Replacement	100,000	100,000	0	0	0	0	0	0	0	200,000	200,000	200,000	0	200,000	0
ewaterline Upgrades & Extensions	0	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	1,250,000	1,250,000	1,250,000	0	1,250,000	0
ir Projects Subtotal	\$13,450,375	\$27,583,000	\$33,452,625	\$19,070,125	\$21,794,438	\$19,914,313	\$19,914,313	\$19,914,313	\$19,914,313	\$8,339,500	\$8,339,500	\$143,604,375	\$36,604,584	\$36,389,686	\$62,270,605
al WMD CIP	\$18,165,000	\$37,779,813	\$44,260,688	\$32,421,000	\$27,273,438	\$23,083,313	\$23,083,313	\$23,083,313	\$23,083,313	\$32,765,125	\$32,765,125	\$215,748,375	\$38,208,803	\$56,731,280	\$88,043,168

CITY OF TEMPE, ARIZONA
FINANCIAL MODEL
WATER / WASTEWATER FUND
Monthly Customer Impact

Scenario 1 - Assumes NO DEVELOPMENT FEE adjustment.

Single Family Residential	2001	2002	2003	2004	2005	2006	2007
Total Monthly Water	\$ 21.75 \$	22.29 \$	22.85 \$	23.31 \$	23.66 \$	24.01 \$	\$24.01
Water - Percent Increase	0%	2%	2%	2%	2%	1%	0%
Total Monthly Sewer	\$ 13.38 \$	13.82 \$	14.25 \$	14.78 \$	15.41 \$	16.05 \$	17.04
Sewer - Percent Increase	0.0%	3.3%	3.1%	3.7%	4.2%	4.2%	6.1%
Total Monthly W/WW Bill	\$ 35.13 \$	36.11 \$	37.10 \$	38.09 \$	39.06 \$	40.06 \$	41.05
Nominal Dollar Increase	\$ - \$	0.98 \$	0.99 \$	0.98 \$	0.98 \$	1.00 \$	0.99
Percent Increase (%)	0.0%	2.8%	2.7%	2.7%	2.6%	2.6%	2.5%

Scenario 2 - Assumes revenue from ~57% Development Fee adjustment based on growth related debt service over 20-year planning horizon.

Single Family Residential	2001	2002	2003	2004	2005	2006	2007
Total Monthly Water	\$ 21.75 \$	22.18 \$	22.63 \$	22.97 \$	23.20 \$	23.43 \$	\$23.43
Water - Percent Increase	0%	2%	2%	1%	1%	1%	0%
Total Monthly Sewer	\$ 13.38 \$	13.75 \$	14.09 \$	14.57 \$	15.14 \$	15.69 \$	16.47
Sewer - Percent Increase	0.0%	2.7%	2.5%	3.4%	3.9%	3.6%	5.0%
Total Monthly W/WW Bill	\$ 35.13 \$	35.93 \$	36.72 \$	37.53 \$	38.33 \$	39.11 \$	39.90
Nominal Dollar Increase	\$ - \$	0.80 \$	0.79 \$	0.81 \$	0.80 \$	0.78 \$	0.79
Percent Increase (%)	0.0%	2.3%	2.2%	2.2%	2.1%	2.0%	2.0%

**CITY OF TEMPE, ARIZONA
FINANCIAL MODEL
WATER / WASTEWATER FUND
OPERATING PRO-FORMA**

DRAFT

** This model assumes NO DEVELOPMENT FEE ADJUSTMENT (Scenario 1).

	2000	2001	2002	2003	2004	2005	2006	2007
REVENUE								
<i>Water Operating Revenues</i>	\$ 24,045,545	\$ 24,348,040	\$ 25,268,701	\$ 26,224,173	\$ 27,083,015	\$ 27,832,876	\$ 28,603,499	\$ 28,961,043
<i>Wastewater Operating Revenues</i>	\$ 15,225,485	\$ 15,287,615	\$ 16,003,270	\$ 16,510,646	\$ 17,119,277	\$ 17,870,496	\$ 18,650,757	\$ 19,780,254
<i>Irrigation Operating Revenues</i>	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859
<i>Interest Revenue</i>	\$ 3,726,676	\$ 3,780,632	\$ 4,109,644	\$ 4,463,787	\$ 4,695,959	\$ 4,773,601	\$ 4,775,786	\$ 4,733,055
<i>Miscellaneous Revenue</i>	\$ 2,779,765	\$ 3,577,731	\$ 4,752,673	\$ 4,752,673	\$ 4,752,673	\$ 4,752,673	\$ 4,752,673	\$ 4,752,673
TOTAL REVENUE	\$ 46,046,330	\$ 47,262,877	\$ 50,403,146	\$ 52,220,138	\$ 53,919,783	\$ 55,498,504	\$ 57,051,573	\$ 58,495,883
OPERATING EXPENSES								
<i>Operating Expenses</i>								
Salaries and Wages	\$ 6,374,329	\$ 6,788,772	\$ 7,196,101	\$ 7,627,899	\$ 8,085,601	\$ 8,570,700	\$ 8,742,114	\$ 8,916,956
Fringe Benefits	\$ 1,248,904	\$ 1,613,346	\$ 1,814,000	\$ 1,943,700	\$ 2,083,301	\$ 2,233,900	\$ 2,278,578	\$ 2,324,150
Materials and Supplies	\$ 1,565,608	\$ 2,426,565	\$ 2,511,100	\$ 2,599,300	\$ 2,696,799	\$ 2,804,700	\$ 2,860,794	\$ 2,918,010
Fees and Services	\$ 5,437,974	\$ 5,685,168	\$ 5,861,500	\$ 6,047,700	\$ 6,253,900	\$ 6,481,800	\$ 6,611,436	\$ 6,743,665
Wastewater Plant - 91st Avenue	\$ 2,678,491	\$ 4,220,000	\$ 4,000,000	\$ 4,225,000	\$ 4,313,725	\$ 4,404,313	\$ 4,496,804	\$ 4,591,237
Net Loss from Joint Venture	\$ 3,096,353	\$ 2,200,000	\$ 2,090,000	\$ 1,980,000	\$ 1,870,000	\$ 1,760,000	\$ 1,650,000	\$ 1,540,000
Depreciation	\$ 8,605,427	\$ 8,304,854	\$ 9,237,090	\$ 10,850,115	\$ 12,703,356	\$ 13,702,469	\$ 14,574,119	\$ 15,189,865
Interest Expense	\$ 3,830,729	\$ 4,001,707	\$ 4,919,556	\$ 6,986,874	\$ 9,542,200	\$ 10,821,676	\$ 12,115,680	\$ 13,634,625
Contingency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Internal Services	\$ 3,689,884	\$ 4,036,738	\$ 4,178,100	\$ 4,324,300	\$ 4,486,400	\$ 4,665,900	\$ 4,759,218	\$ 4,854,402
TOTAL OPERATING EXPENSES	\$ 36,527,699	\$ 39,277,150	\$ 41,807,447	\$ 46,584,889	\$ 52,035,282	\$ 55,445,458	\$ 58,088,743	\$ 60,712,910
NET EXCESS (DEFICIT)	\$ 9,518,631	\$ 7,985,727	\$ 8,595,699	\$ 5,635,249	\$ 1,884,501	\$ 53,046	\$ (1,037,170)	\$ (2,217,027)
ACCUMULATED DEPRECIATION	\$ 8,605,427	\$ 16,910,281	\$ 26,147,371	\$ 36,997,487	\$ 49,700,843	\$ 63,403,312	\$ 77,977,431	\$ 93,167,296
FUND BALANCE (Unreserved)	\$ 56,434,920	\$ 64,420,647	\$ 73,016,345	\$ 78,651,594	\$ 80,536,096	\$ 80,589,142	\$ 79,551,972	\$ 77,334,945

**CITY OF TEMPE, ARIZONA
FINANCIAL MODEL
WATER / WASTEWATER FUND
OPERATING PRO-FORMA**

DRAFT

** This model assumes ~57% increase in development fees (Scenario 2).

	2000	2001	2002	2003	2004	2005	2006	2007
REVENUE								
Water Operating Revenues	\$ 24,045,545	\$ 24,348,040	\$ 25,145,439	\$ 25,968,952	\$ 26,687,967	\$ 27,291,782	\$ 27,909,259	\$ 28,258,125
Wastewater Operating Revenues	\$ 15,225,485	\$ 15,287,615	\$ 15,933,574	\$ 16,354,804	\$ 16,911,696	\$ 17,609,846	\$ 18,294,322	\$ 19,223,128
Irrigation Operating Revenues	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859	\$ 268,859
Interest Revenue	\$ 3,726,676	\$ 3,780,632	\$ 4,142,280	\$ 4,545,764	\$ 4,820,325	\$ 4,934,209	\$ 4,965,927	\$ 4,943,688
Miscellaneous Revenue	\$ 2,779,765	\$ 4,369,859	\$ 6,110,607	\$ 6,110,607	\$ 6,110,607	\$ 6,110,607	\$ 6,110,607	\$ 6,110,607
TOTAL REVENUE	\$ 46,046,330	\$ 48,055,005	\$ 51,600,758	\$ 53,248,985	\$ 54,799,454	\$ 56,215,303	\$ 57,548,974	\$ 58,804,406
OPERATING EXPENSES								
Operating Expenses								
Salaries and Wages	\$ 6,374,329	\$ 6,788,772	\$ 7,196,101	\$ 7,627,899	\$ 8,085,601	\$ 8,570,700	\$ 8,742,114	\$ 8,916,956
Fringe Benefits	\$ 1,248,904	\$ 1,613,346	\$ 1,814,000	\$ 1,943,700	\$ 2,083,301	\$ 2,233,900	\$ 2,278,578	\$ 2,324,150
Materials and Supplies	\$ 1,565,608	\$ 2,426,565	\$ 2,511,100	\$ 2,599,300	\$ 2,696,799	\$ 2,804,700	\$ 2,860,794	\$ 2,918,010
Fees and Services	\$ 5,437,974	\$ 5,685,168	\$ 5,861,500	\$ 6,047,700	\$ 6,253,900	\$ 6,481,800	\$ 6,611,436	\$ 6,743,665
Wastewater Plant - 91st Avenue	\$ 2,678,491	\$ 4,220,000	\$ 4,000,000	\$ 4,225,000	\$ 4,313,725	\$ 4,404,313	\$ 4,496,804	\$ 4,591,237
Net Loss from Joint Venture	\$ 3,096,353	\$ 2,200,000	\$ 2,090,000	\$ 1,980,000	\$ 1,870,000	\$ 1,760,000	\$ 1,650,000	\$ 1,540,000
Depreciation	\$ 8,605,427	\$ 8,304,854	\$ 9,237,090	\$ 10,850,115	\$ 12,703,356	\$ 13,702,469	\$ 14,574,119	\$ 15,189,865
Interest Expense	\$ 3,830,729	\$ 4,001,707	\$ 4,919,556	\$ 6,986,874	\$ 9,542,200	\$ 10,821,676	\$ 12,115,680	\$ 13,634,625
Contingency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Internal Services	\$ 3,689,884	\$ 4,036,738	\$ 4,178,100	\$ 4,324,300	\$ 4,486,400	\$ 4,665,900	\$ 4,759,218	\$ 4,854,402
TOTAL OPERATING EXPENSES	\$ 36,527,699	\$ 39,277,150	\$ 41,807,447	\$ 46,584,889	\$ 52,035,282	\$ 55,445,458	\$ 58,088,743	\$ 60,712,910
NET EXCESS (DEFICIT)	\$ 9,518,631	\$ 8,777,855	\$ 9,793,311	\$ 6,664,097	\$ 2,764,172	\$ 769,845	\$ (539,769)	\$ (1,908,504)
ACCUMULATED DEPRECIATION	\$ 8,605,427	\$ 16,910,281	\$ 26,147,371	\$ 36,997,487	\$ 49,700,843	\$ 63,403,312	\$ 77,977,431	\$ 93,167,296
FUND BALANCE (Unreserved)	\$ 56,434,920	\$ 65,212,775	\$ 75,006,086	\$ 81,670,183	\$ 84,434,355	\$ 85,204,199	\$ 84,664,430	\$ 82,755,926